

## **Managing Spent Fuel and Nuclear Waste Successfully – What Needs to Be Done?**

Testimony to the Blue-Ribbon Commission on the Nuclear Future – Key Points

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- The key to success is rebuilding public trust, through a voluntary, democratic process.
  - The most important contribution the Commission could make is to design and help to launch a process capable of regaining public trust and acceptance for siting the needed facilities.
- We have time; we should not rush to judgment or lock in technological choices prematurely.
  - The Commission should focus first on interim storage of spent nuclear fuel and nuclear waste, including establishing at least limited centralized storage for spent fuel from decommissioned reactor sites.
- We will need a permanent geologic waste repository no matter what nuclear fuel cycle options we pursue.
  - We should not put permanent repositories on an indefinite back-burner, but should establish a credible repository program, in part because this is likely to be important to gaining public acceptance for interim storage sites.
- Reprocessing with existing or near-term technologies poses high costs and risks and few benefits.
  - Traditional reprocessing technologies are more expensive than open fuel cycles and raise additional safety, security, and proliferation risks. More advanced technologies may be more expensive, and would still, if deployed in many countries, offer facilities and expertise that would be very useful to a nuclear weapons program.
  - There are sufficient supplies of uranium to fuel a growing global nuclear enterprise for decades, and repositories can easily be designed with sufficient capacity for once-through disposal of spent nuclear fuel.
- We should manage the nuclear fuel cycle in the United States in a way that allows nuclear energy to grow and spread around the world while minimizing nuclear proliferation and terrorism risks.
  - The United States should seek to minimize and ultimately eliminate the civil use of HEU and separated plutonium, and should seek to ensure that stringent security measures are in place for all nuclear weapons and weapons-usable material worldwide.
  - The United States should reiterate that it does not reprocess for either civilian energy or nuclear weapons purposes, and does not encourage others to do so.
  - The United States should take additional steps to limit the spread of enrichment and reprocessing facilities – including, in cooperation with other countries, being willing to take limited quantities of spent power reactor fuel from foreign countries, as part of an effort to convince countries they do not need their own enrichment and reprocessing facilities.
  - The United States should seek the strongest practicable controls over enrichment and reprocessing facilities and related technologies – including, in the long run, moving toward multinational control and staffing of such facilities.
- It is worth investing in research and development on improved approaches to both open and closed fuel cycles.